

CLAIMS:

What is claimed is:

- 5 1. A method of maintaining a two-byte identification field of an Internet protocol (IP) header of a packet, the packet being transmitted over a network, the method comprising the steps of:
 - 10 determining whether the packet is permitted to be fragmented; and

using a non-unique identification number in the IP header if the packet is not permitted to be fragmented.
- 15 2. The method of Claim 1 wherein the network is a Gigabit Ethernet network.
3. The method of Claim 2 wherein a re-assembly timer is
20 set to 30 seconds.
4. The method of Claim 3 wherein a bit is set in the IP header to indicate whether the packet is permitted to be fragmented.
- 25 5. The method of Claim 4 wherein the bit is set in a flag field of the IP header.
- 30 6. A computer program product on a computer readable medium for maintaining a two-byte identification field of an Internet protocol (IP) header of a packet, the

packet being transmitted over a network, the computer program product comprising:

5 code means for determining whether the packet is permitted to be fragmented; and

code means for using a non-unique identification number in the IP header if the packet is not permitted to be fragmented.

10

7. The computer program product of Claim 6 wherein the network is a Gigabit Ethernet network.

15

8. The computer program product of Claim 7 wherein a re-assembly timer is set to 30 seconds.

20

9. The computer program product of Claim 8 wherein a bit is set in the IP header to indicate whether the packet is permitted to be fragmented.

25

10. The computer program product of Claim 9 wherein the bit is set in a flag field of the IP header.

11. An apparatus for maintaining a two-byte identification field of an Internet protocol (IP) header of a packet, the packet being transmitted over a network, the apparatus comprising:

30

means for determining whether the packet is permitted to be fragmented; and

means for using a non-unique identification number in the IP header if the packet is not permitted to be fragmented.

5 12. The apparatus of Claim 11 wherein the network is a Gigabit Ethernet network.

13. The apparatus of Claim 12 wherein a re-assembly timer is set to 30 seconds.

10

14. The apparatus of Claim 13 wherein a bit is set in the IP header to indicate whether the packet is permitted to be fragmented.

15 15. The apparatus of Claim 14 wherein the bit is set in a flag field of the IP header.

16. A computer system for maintaining a two-byte identification field of an Internet protocol (IP) header of a packet, the packet being transmitted over a network, the computer system comprising:

20

at least one memory device for storing code data; and

25 at least one processor for processing the code data to determine whether the packet is permitted to be fragmented and to use a non-unique identification number in the IP header if the packet is not permitted to be fragmented.

30

17. The computer system of Claim 16 wherein the network is a Gigabit Ethernet network.

18. The computer system of Claim 17 wherein a re-assembly timer is set to 30 seconds.
- 5 19. The computer system of Claim 18 wherein a bit is set in the IP header to indicate whether the packet is permitted to be fragmented.
- 10 20. The computer system of Claim 19 wherein the bit is set in a flag field of the IP header.

15